said oligonucleotide primer along said control polynucleotide is controlled by the 3'-mismatch relative to the extension of said oligonucleotide primer along said target sequence.

21. (Amended) The method of Claim 9 wherein said extending is carried out in the presence of nucleoside triphosphates.

25. (Twice Amended) A method for forming multiple copies of at least one double stranded polynucleotide ("polynucleotide") said polynucleotide comprising a single stranded target polynucleotide sequence ("target sequence") and its complementary sequence ("complementary sequence"), said method comprising:

(a) treating a sample suspected of containing one or more of said double stranded polynucleotides with (i) at least two oligonucleotide primers capable of hybridizing to a portion of each target sequence and its complementary sequence suspected of being present in said sample under polynucleotide amplification conditions for hybridizing said primers to and extending said primers along said target sequence and said complementary sequence, wherein said primers are selected such that the extension product formed from one primer ("primer A"), when it is dissociated from its complement, can serve as the template for the extension product of another primer ("primer B"), (ii) a control polynucleotide, as a template to which a control primer hybridizes except for 1-10 nucleotides of the primer at the 3'-end, wherein said control primer is selected from the group consisting of primer A and primer B, and (iii) a 3' to 5' exonuclease wherein said primers extend, respectively, along said target sequence and said complementary sequence and the control primer extends along said control polynucleotide only after said 1-10 nucleotides are degraded by said 3' to 5' exonuclease,

(b) dissociating primer extension products from their respective templates to produce single stranded molecules and

(c) treating the single stranded molecules produced in step (b) with the primers of step (a) under polynucleotide amplification conditions such that a primer extension product is formed using the single strands produced in step (b) as templates, resulting in amplification of the target sequences and complementary sequences if present, said polynucleotide amplification conditions allowing for the extension of the control primer along said control polynucleotide to provide said positive internal control.

39. (Twice Amended) A method of producing multiple copies of a target sequence of a target polynucleotide, which comprises:

(a) providing in combination (1) a single stranded polynucleotide having a sequence that is said target sequence and that is flanked at each end by at least partially complementary first and second flanking sequences, (2) an oligonucleotide primer at least a 10 base portion of which at its 3'-end is hybridizable to that member of said first and second flanking sequences that is at the 3'-end of said single stranded polynucleotide, (3) nucleoside triphosphates, (4) a control polynucleotide, as a template to which said oligonucleotide primer hybridizes except for 1-10 nucleotides at the 3'-end of said nucleotide primer, and (5) a 3' to 5' exonuclease wherein said primer extends along said target sequence and said primer extends along said control polynucleotide only after said 1-10 nucleotides are degraded by said 3' to 5' exonuclease,

(b) incubating said combination under polynucleotide amplification conditions for (1) dissociating said single stranded polynucleotide from any complementary sequences, (2) hybridizing said oligonucleotide primer with the flanking sequence at the 3'-end of said single stranded polynucleotide and with said control polynucleotide, (3) extending said oligonucleotide primer along said single stranded polynucleotide to provide a first extended oligonucleotide primer and degrading said oligonucleotide primer hybridized to said control polynucleotide and extending said degraded oligonucleotide along said control polynucleotide, (4) dissociating said first extended primer and said single stranded polynucleotide and dissociating said control polynucleotide and said extended degraded primer, (5) hybridizing said first extended oligonucleotide primer with said oligonucleotide primer and hybridizing said oligonucleotide primer and said control polynucleotide, (6) extending said oligonucleotide primer along said first extended oligonucleotide primer to provide a second extended oligonucleotide primer and degrading said oligonucleotide primer hybridized to said control polynucleotide and extending said oligonucleotide primer along said control polynucleotide to provide an extended degraded primer, (7) dissociating said second extended oligonucleotide primer from said first extended oligonucleotide primer and said extended degraded primer from said control polynucleotide, and (8) repeating steps (5)-(7) above, and

(c) detecting the presence of said extended degraded primer, the presence thereof indicating that said reagents and polynucleotide amplification conditions for producing multiple copies of said target sequence of a target polynucleotide are functional.

59. (Amended) The method of claim 1, wherein the extension of said oligonucleotide primer along said control polynucleotide is controlled by contacting the 3'-mismatch with a 3' to 5' exonuclease.